

Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Amendments to the Drawings:

The attached twenty-four sheets of drawings include changes to Figs. 1 through 14. These Figs. 1 through 14 replace the original Figs. 1 through 14. Reference numerals "322" and "330", signifying second input and output NAs, have been added to Fig. 14, while the phrase "Related Art" has been added to each of Figs. 1 through 13.

Attachment: Replacement sheets (12)
Annotated sheets showing drawing changes (12)

Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

REMARKS

Claims 1 through 4 and 6 through 38 are pending in this application. Claims 1 and 17 through 38 are amended herein. Claim 5 is cancelled herein with neither prejudice nor disclaimer. Support for the amendments to claims 1 and 17 through 38 may be found in the claims as originally filed, and particularly in former claim 5. Reconsideration is requested based on the foregoing amendment and the following remarks.

Objections to the Drawings:

The drawings were objected to for lacking a designation such as 'Prior Art' in Figs. 1 through 13, and Fig. 14 was objected to for lacking reference numerals 332 and 330. The Applicant presumes the Office action meant "322", rather than "332", since there is no 332 in the specification. The legend 'Related Art', which is submitted to be a designation *such as* 'Prior Art', has been added to the accompanying Figs. 1 through 13, while reference numerals "322" and "330", signifying second input and output NAs, have been added to Fig. 14. Withdrawal of the objections to the drawings is earnestly solicited.

Objections to the Claims:

Claims 17 through 38 were objected to for various informalities. Claims 17 through 38 were amended in substantial accord with the Examiner's suggestions. The Examiner's suggestions are appreciated. Withdrawal of the objection is earnestly solicited.

Claim Rejections - 35 U.S.C. § 102:

Claims 1, 2, 14, 15, and 16 were rejected under 35 U.S.C. § 102(b) as anticipated by Winston, US 4,240,692. The rejection is traversed to the extent it would apply to the claims as amended.

Claim 1 has been amended to include the subject matter of former claim 5, which the Office action indicated to be allowable. Claim 1 has been amended, and claim 5 cancelled, solely in the interest of compact prosecution, and not for any reason of patentability. Claim 1 is submitted to be allowable. Withdrawal of the rejection of claim 1 is earnestly solicited.

Claims 2, 14, 15, and 16 depend from claim 1 and add further distinguishing elements. Claims 2, 14, 15, and 16 are thus also submitted to be allowable. Withdrawal of the rejection of claims 2, 14, 15, and 16 is also earnestly solicited.

Claim Rejections - 35 U.S.C. § 103:

Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Claims 3, 4, 17, 20 through 32 and 36 were rejected under 35 U.S.C. § 103 as being unpatentable over Winston in view of Ferrante *et al.*, US 6,595,673 and Strobl *et al.*, US 5,414,600. The rejection is traversed to the extent it would apply to the claims as amended.

Claims 3, 4, 17, 20 through 32 and 36 depend from claim 1 and add additional distinguishing elements. Claim 1 has been amended to include the subject matter of former claim 5, as discussed above. Claims 3, 4, 17, 20 through 32 and 36 are thus also submitted to be allowable. Withdrawal of the rejection of claims 3, 4, 17, 20 through 32 and 36 is earnestly solicited.

Claims 18 and 19 were rejected under 35 U.S.C. § 103 as being unpatentable over Winston in view of Strobl, and further in view of Kingston *et al.*, US 5,528,714. The rejection is traversed to the extent it would apply to the claims as amended.

Claims 18 and 19 depend from claim 1 and add additional distinguishing elements. Claim 1 has been amended to include the subject matter of former claim 5, as discussed above. Claims 18 and 19 are thus also submitted to be allowable. Withdrawal of the rejection of claims 18 and 19 is earnestly solicited.

Claim 37 was rejected under 35 U.S.C. § 103 as being unpatentable over Winston in view of Strobl, and further in view of Horiuchi *et al.*, JP01049017. The rejection is traversed to the extent it would apply to the claims as amended.

Claim 37 depends from claim 1 and adds additional distinguishing elements. Claim 1 has been amended to include the subject matter of former claim 5, as discussed above. Claim 37 is thus also submitted to be allowable. Withdrawal of the rejection of claim 37 is earnestly solicited.

Allowable Subject Matter:

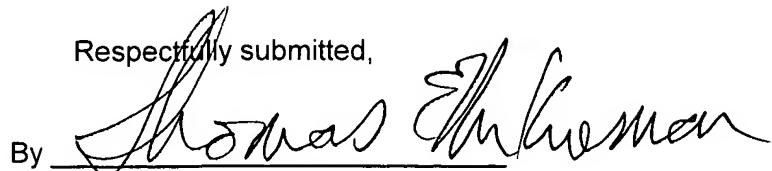
The Applicant acknowledges with appreciation the indication that claims 5 through 13, 33, 34, 35 and 38 contain allowable subject matter.

Conclusion:

Accordingly, in view of the reasons given above, it is submitted that all claims 1 through 4 and 6 through 38 are allowable over the cited references. Since the objections to the drawings were addressed and the claims were amended to overcome the objections, it is submitted that all of claims 1 through 4 and 6 through 38 are now allowable. Allowance of all

Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

claims 1 through 4 and 6 through 38 and of this entire application are therefore respectfully requested.

Respectfully submitted,
By 
Thomas E. McKiernan
Reg. No. 37,889
Attorney for Applicants
ROTHWELL, FIGG, ERNST & MANBECK
Suite 800, 1425 K Street, N.W.
Washington, D.C. 20005
Telephone: (202)783-6040

Attachments
2138-241-amd



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

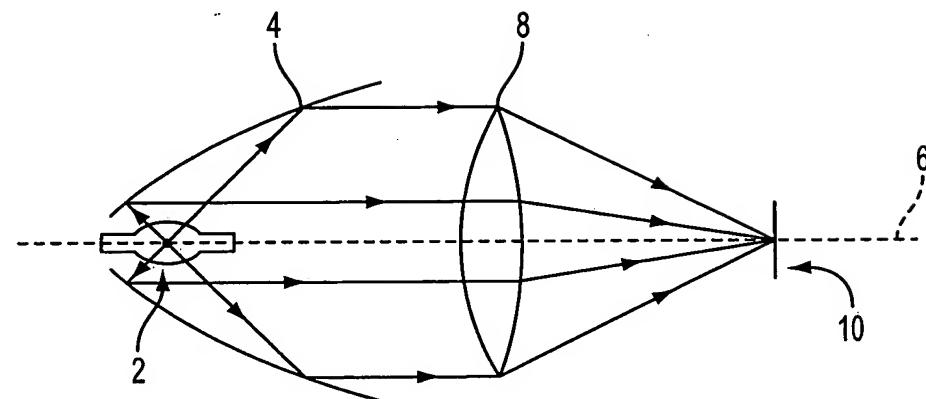


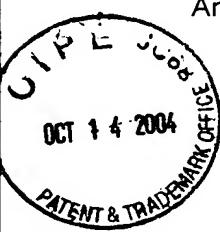
FIG. 1

Related Art

ADDED



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004



Annotated Sheet Showing Changes

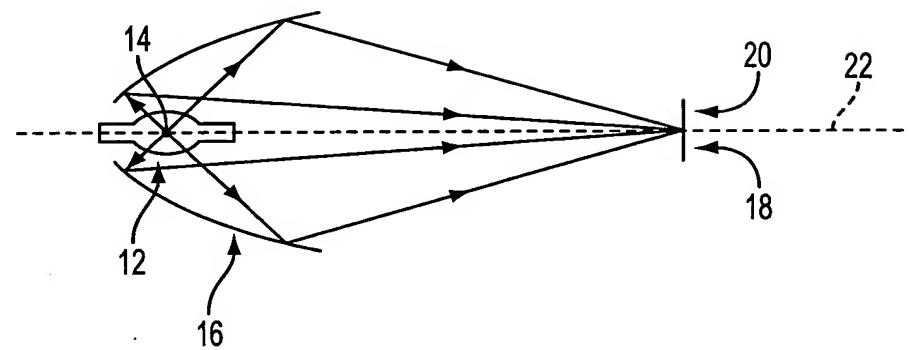


FIG. 2

Related Art

ADDED



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

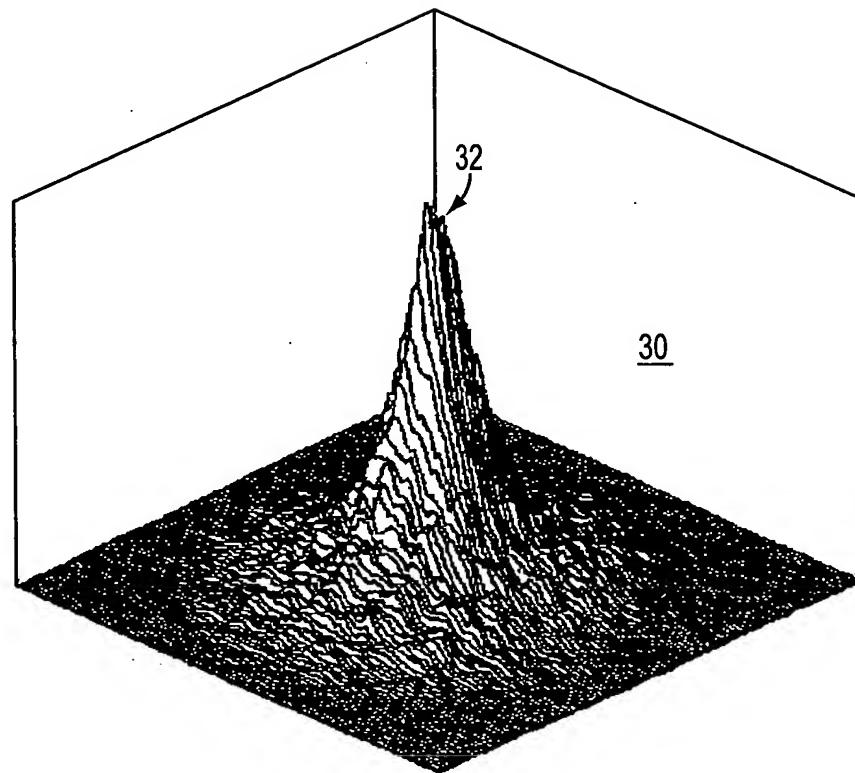
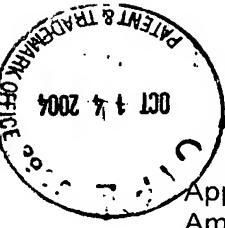


FIG. 3

Related Art

ADDED



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

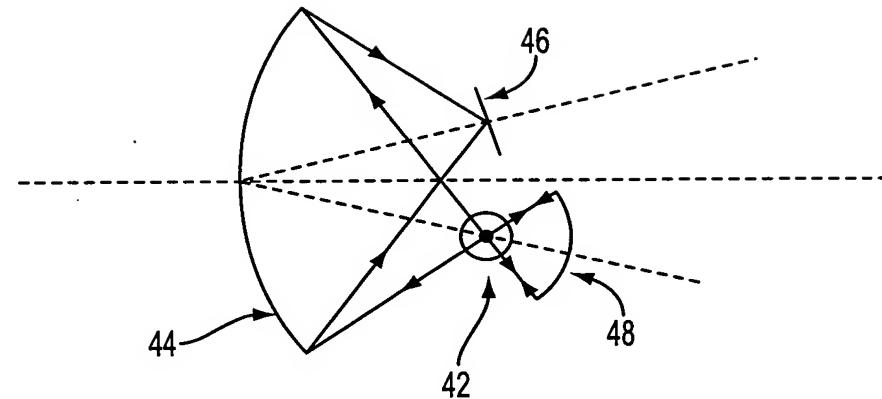


FIG. 4

Related Art

ADDED



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

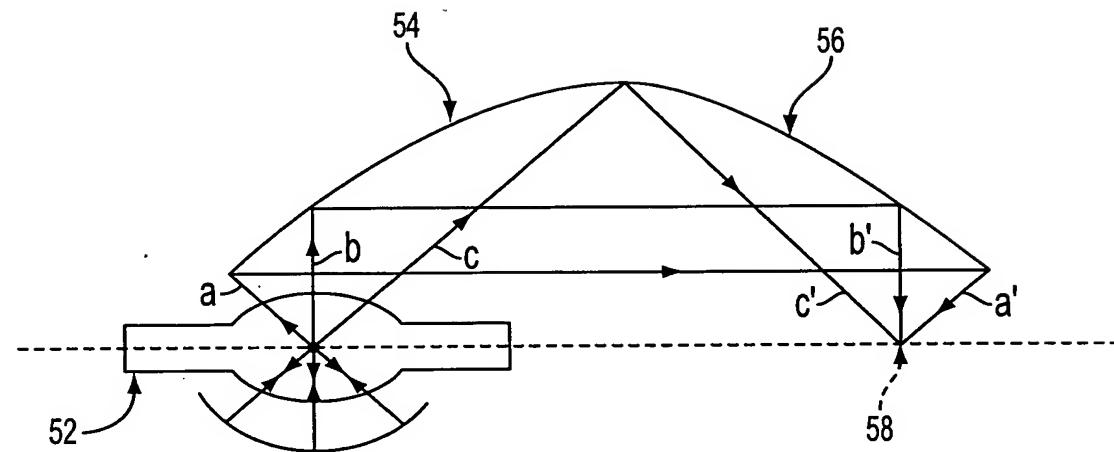
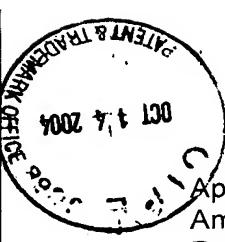


FIG. 5



ADD ED



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

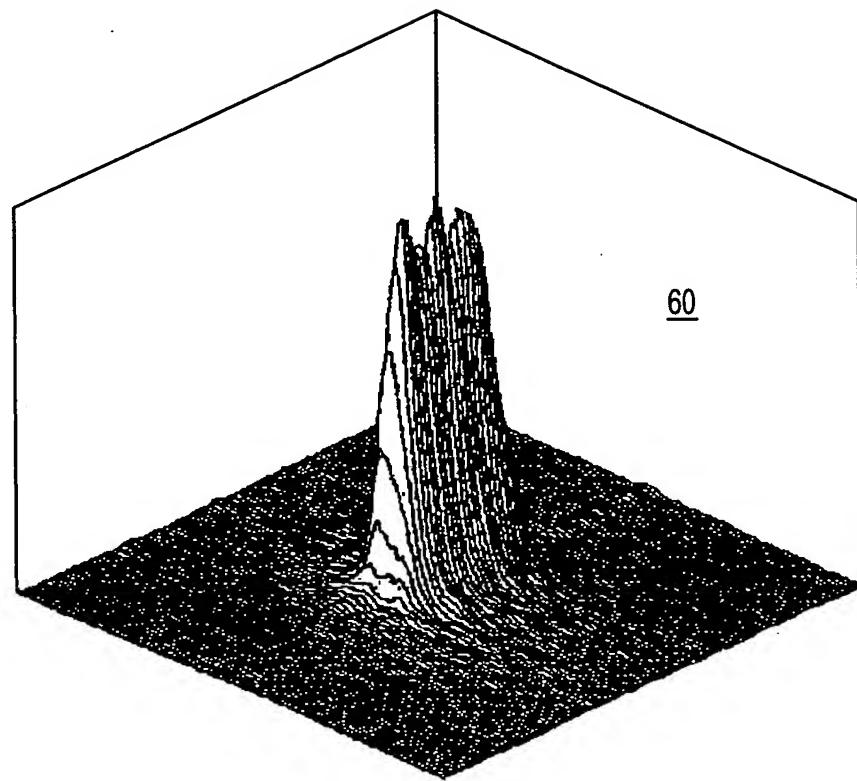
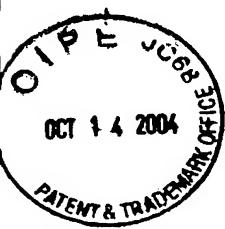


FIG. 6

Related Art

ADDED



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

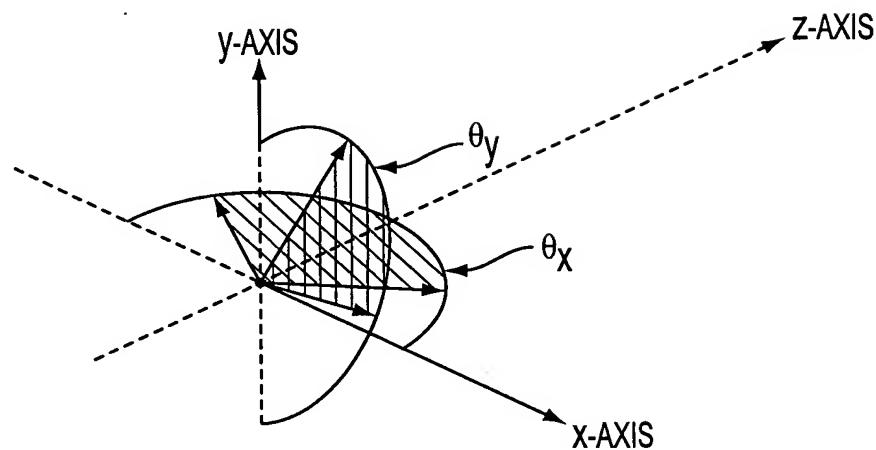


FIG. 7

Related Art

ADDED



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

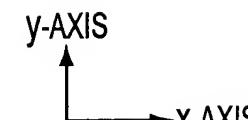


FIG. 8(a) Related Art

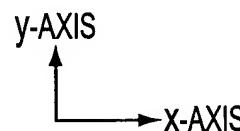


FIG. 8(b) Related Art

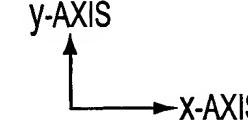
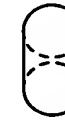


FIG. 8(c) Related Art

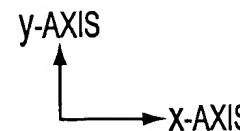
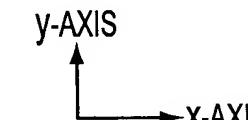


FIG. 8(d) Related Art

ADDED (5 PLACES)



Related Art

FIG. 8(e)



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

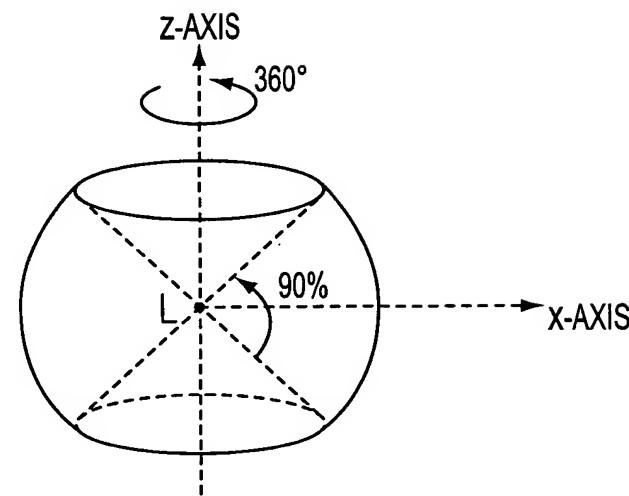


FIG. 9

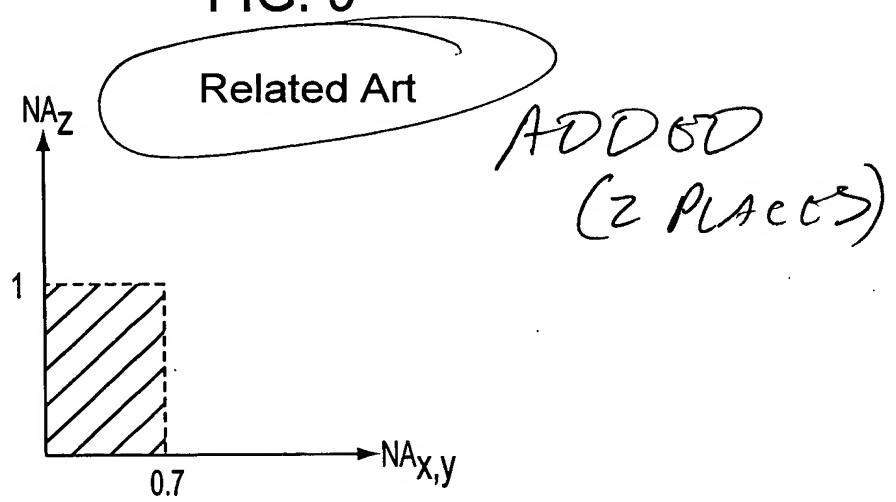


FIG. 10

Related Art



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

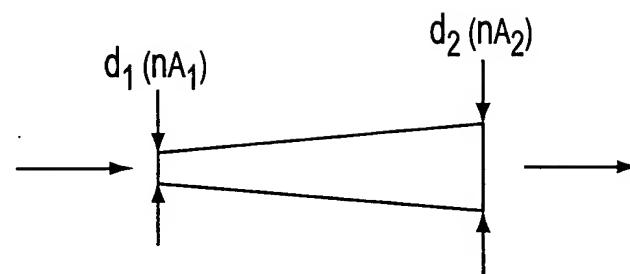


FIG. 11

Related Art

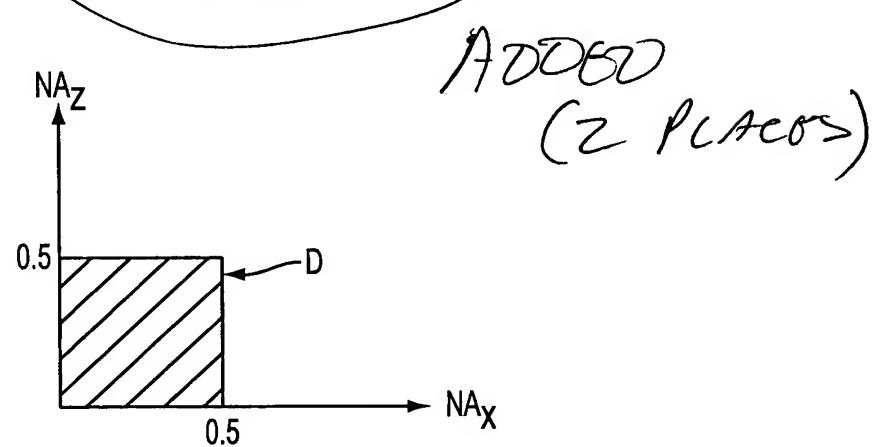
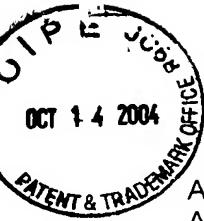


FIG. 12

Related Art



Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

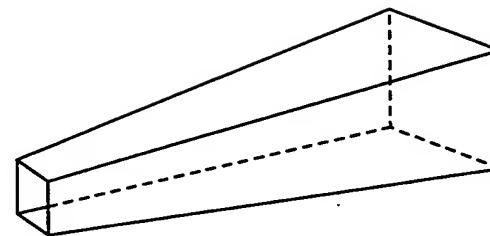


FIG. 13

Related Art

Added

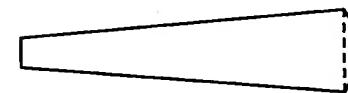


FIG. 16



OCT 14 2004

Application Serial No. 10/086,642
Amendment dated October 13, 2004
Reply to Office action of July 15, 2004

Annotated Sheet Showing Changes

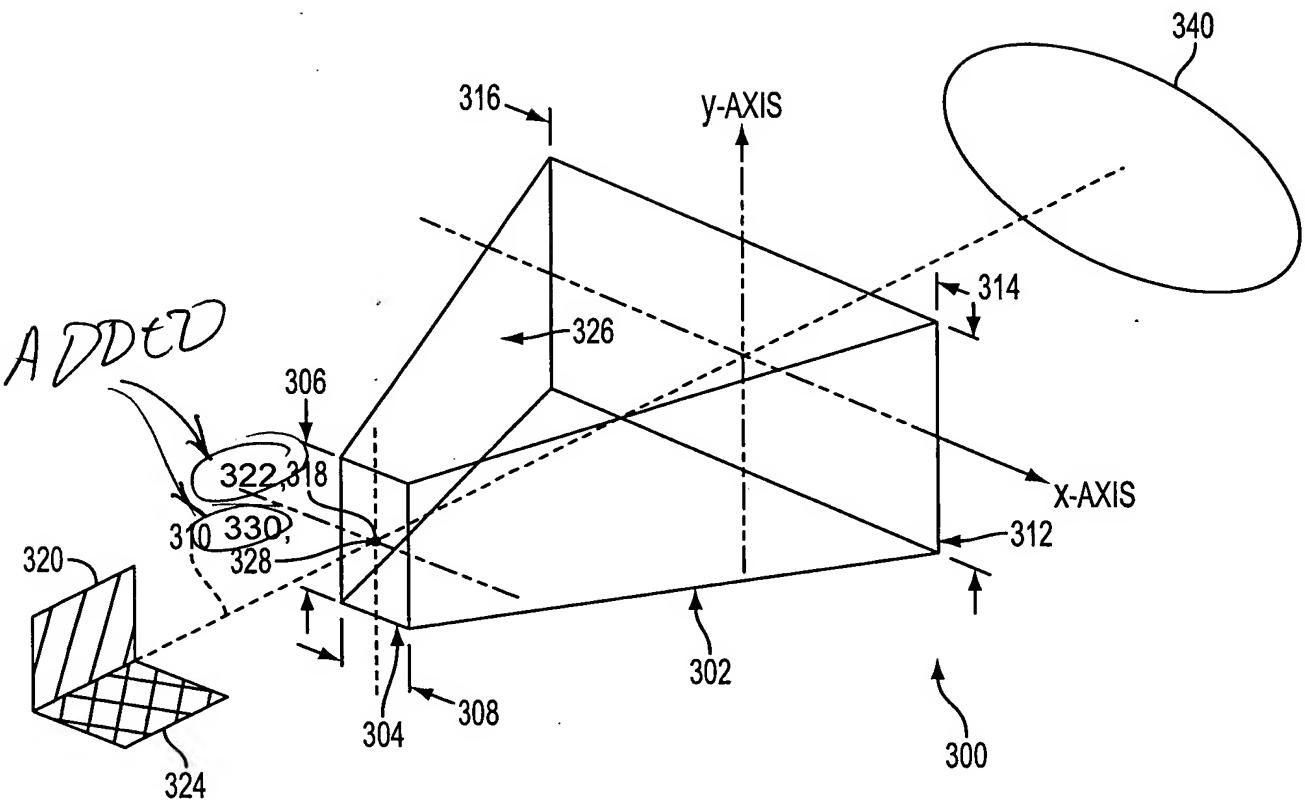


FIG. 14